

We claim:

1. An isolated variant hepatitis B surface antigen comprising an amino acid sequence wherein mutations from hepatitis B wild type ayw2 strain appear as follows: at position 103 isoleucine is present instead of methionine, at position 118 lysine is present instead of threonine, at position 120 glutamine is present instead of proline, at position 170 serine is present instead of leucine, and at position 213 serine is present instead of leucine.
2. An expression vector for expression of a variant hepatitis B surface antigen in a recombinant host, wherein said vector contains a recombinant gene encoding the variant hepatitis B surface antigen of claim 1.
3. A monoclonal antibody raised against the variant hepatitis B surface antigen of claim 1.
4. A hybridoma cell line which secretes the monoclonal antibody of claim 3.
5. An assay kit for determining the presence of hepatitis B in a test sample, comprising: a container containing at least one monoclonal antibody which specifically binds to hepatitis B surface antigen wherein the monoclonal antibody is a monoclonal antibody secreted by the hybridoma cell line claimed in claim 4.
6. A method for determining the presence of hepatitis B in a test sample, comprising:

- a. contacting a test sample with at least one monoclonal antibody claimed in claim 3 attached to a solid phase, to form a mixture,
- b. incubating the mixture for a time and under conditions sufficient to form antigen-antibody complexes,
- c. contacting the complexes with an antibody conjugated to a signal generating reagent that is specific for the complexes, and
- d. determining the presence of hepatitis B present in the test sample by detecting the signal generated.